

Gynecologic Oncology

FUNDAMENTAL PRINCIPLES AND CLINICAL PRACTICE

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EDITED BY

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Preface

Each year the problems of oncology become more and more complex as the advance of knowledge uncovers further detail at every level of investigative endeavor from the basic through epidemiologic to the clinical and aftercare. Some of these advances are sufficiently valuable as to require a place of recognition if not actual use in the daily round of the busy practitioner and there is a persisting problem of the presentation of this intelligence in the most appropriate form consistent with the time available for its assimilation. On balance there is a good case to be made for the traditional comprehensive textbook with its properties of convenience, condensation and permanence as a persisting vehicle for this burgeoning output from the clinics and laboratories of the world. This book has been designed to fill a hiatus in the library for a comprehensive, authoritative and particularly detailed, even encyclopedic, treatment of the whole field of gynecologic oncology for an equally wide range of practitioners from the novice attempting entry into the specialty (the Boards level of American parlance) through the typical specialist to the superspecialist of to-day.

To effect this broad design I have invited a large number of distinguished authorities from leading centers in various countries, alike in the height of their repute often on a world basis, their grasp of the field often as a direct result of years of original study, and their ability to epitomize a great mass of detailed information, itself a reflection of the amount of information now generated on every conceivable topic. Each was briefed on the editorial aim of vesting the most recent views on the principles or basic framework of a given topic with a wealth of personal experience, technique and know-how to ensure the understanding and execution of these principles at the bedside or in the theater. Editorial authority for its part has been asserted frequently and intensively through the miscellany of subjects to avoid redundancy, keep the story coherent and ever instructive, even entertaining. A strict regime was established for unifying subdivision of the material of each topic to preserve a sense of coherence and regularity such as might be expected were the whole volume to be the work of one author, and to facilitate the reference function of the book. Extensive cross-referencing within the book has been an outcome of this policy.

The manipulation of such a large volume of material has

focussed attention on its arrangement. The subject matter progresses from a description of the theoretical background of the specialty, through diagnosis and its techniques, to descriptions of tumors of gynecologic significance, vulva, vagina, uterus, tube, ovary and trophoblast. Each tumor type is discussed through its pathology, clinical features and treatment. The surgical aspects of treatment are given extensive coverage, not only of the more conventional operations but of the newer conservative methods which are now in widespread use for the management of intraepithelial and other very early stages, and of the new approaches to vulvar and vaginal reconstruction. There is a growing awareness of the importance of aftercare and this has been accommodated in a series of chapters following the descriptions of major complications of radical surgery and irradiation which have made the subject of aftercare so necessary.

I thank the many distinguished contributors who made this book possible for their considerate and friendly co-operation. Their efforts, complicating further their own busy daily rounds, are appreciated. It is a pleasure to express my great debt of gratitude to my friend, scientific collaborator and co-author of other books, Bevan Reid, for his continued encouragement, sound counsel and invaluable assistance in countless ways. Without his generous help the undertaking would have been more onerous. I wish to acknowledge the part played by my colleague and friend, Dr Albert Singer, for his encouragement and reassurance when the project was first mooted. I acknowledge the generous co-operation of the many authors, journals and publishers who have permitted the use of graphs, drawings, photographs and statistical material. Due acknowledgment is given to each in the text. I extend my thanks to my personal secretaries, Shirley Bottrell, who spent so many tedious hours typing much of the manuscript, and Mary O'Connor. They were gracious, ever-helpful and ever-forgiving over the many months of the project. I thank Peter Ffrench for painstaking bibliographic and other assistance. My sincere thanks are due to the staff of Churchill Livingstone, especially Sylvia Hull, Dinah Bagshaw and Andrew Stevenson, who at all stages of production have been enthusiastic, co-operative and have always displayed a deep understanding of the book's requirements.

Sydney, 1981

M.C.

Foreword

This treatise deals with a specialty that has come of age. And it has done so in just under fifty years, for surely among the first intimations was the publication of Meigs' classic *Tumors of the Female Pelvic Organs* in 1934. It is notable that one man in that year could write a book based on one hospital's experience and cover the subject so completely that the resultant text served us well for over a decade. Whereas now the multidisciplinary nature of the subject, in all its scientific and clinical ramifications, must call upon a host of authors and many institutions if the editor truly seeks to spread before us the best and latest word on every relevant facet.

It is not mere chance that this specialty within a specialty evolved in gynecology. Most pelvic cancer in the female is accessible and treatable, and some gynecologists and pathologists have stepped forward in every decade to dedicate themselves to its study. As a consequence a series of signal advances, many of which have been applicable to oncology in general, have first been promoted in gynecologic oncology. There has been first the use of radium and X-ray for curative purposes, then the classification of disease by stages in order to be able to evaluate treatment, next the identification of a preinvasive stage of squamous cancer, then the epoch making observations of Papanicolaou in cytology, and finally the purposeful designing of curative protocols for disseminated disease by chemotherapeutic agents.

Twenty-five years ago the gynecologic oncologist was first and foremost a surgeon, often the most radically oriented technician on a hospital's roster. He was clearly not an obstetrician but his orientation and the necessity for equal facility from the perineal as well as the abdomino-pelvic

approach set him apart from the general surgeon. The best among us had more than passing acquaintance with pathology, radiotherapy, and more recently with chemotherapy. Encouraged by spectacular improvements in anesthesia and the support mechanisms to control shock, sepsis and other metabolic reversals, this cohort of pelvic surgeons during the middle decades of the century systematically explored the ultimate perimeters of radicality.

Much was learned, particularly about the natural course of gynecologic cancers, but the era is ending as the data accumulate to indicate that in the main the increased salvage is small. The potentials and indications for various procedures have sorted themselves out, and a new generation of oncologists has arrived on the scene, trained in multiple disciplines and philosophically oriented to individualization of the clinical presentations and to a careful and logical selection of the optimum program for each patient.

For the gynecologic oncologist of this stripe, a book like this one is indispensable. It will be uniquely useful to those who have the specialty under contemplation, as a learning tool to trainees and a reference source for the accredited specialist. Malcolm Coppleson is to be congratulated for the muster of highly qualified contributors he has rallied, for the breadth, depth, and variety of topics dealt with, and for the time and attention he has so obviously devoted to the pursuit of excellence in an area of biological science he has himself long adorned.

Boston, 1981

H.U.

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Gynecologic Oncology

FUNDAMENTAL PRINCIPLES AND CLINICAL PRACTICE

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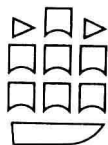
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Training of the gynecologic oncologist

J. L. Lewis Jr

INTRODUCTION

The recent emergence of gynecologic oncology as a recognized field in obstetrics and gynecology has raised the question of the appropriate training needed to become a specialist in this area. There are many ways to define or describe the gynecologic oncologist—his training, knowledge, skills, activities, practice, institutional setting, as well as his integration into the educational, clinical care and research activities of medicine. Briefly, a gynecologic oncologist can be defined as a clinical specialist in obstetrics and gynecology who, by way of training, experience and capabilities, is involved primarily in the study and treatment of women with gynecologic malignancies.

Used broadly, the term "gynecologic oncologist" might include anyone who is a specialist in any aspect of medicine which relates to the study or care of gynecologic malignancies. Used in that sense, the specialty would include those whose primary activity is limited to radical pelvic surgery, radiation therapy, chemotherapy, pathology, cytology or other approach based on a single technology as long as they were actively engaged in the care or study of gynecologic malignancies or their precursors. The field of gynecologic oncology includes all of the knowledge and techniques which apply to gynecologic malignancies regardless of the field from which the contribution was made. But today's specialist should have broader training and expertise than that of a single field. Ideally, a gynecologic oncologist is a clinician who has acquired knowledge and skills sufficient to utilize all the effective forms of therapy of gynecologic malignancies. Training, skills and knowledge not only in radical pelvic surgery but also of radiation therapy, chemotherapy, pathology and other medical specialties are obligatory. Activities should be organized in a clinical service which utilizes all of the effective forms of treatment. Collaborative treatment protocols should be developed with radiation therapy and medical oncology so that the treatment a patient receives is determined by her disease and not by the circumstance of which physician sees her first.

The evolution of the role of the gynecologic oncologist has taken a long time and has utilized contributions from many fields in addition to obstetrics and gynecology: general surgery, radiation therapy, medical chemotherapy, cytopathology and the newer areas of immunology, intensive care medicine, infectious disease therapy, nutritional support and others. Of these, the early contributions came from surgery and radiation therapy. Our indebtedness is great to those who developed most of the radical surgical procedures we employ today: radical hysterectomy and pelvic lymphadenectomy, radical vulvectomy with inguinal and pelvic lymphadenectomy; pelvic exenterative procedures, urinary diversionary techniques and the newer techniques of skin grafts and vascularized flaps for reconstructive procedures. Similarly, although little of the science and technology of radiation therapy and modern chemotherapy was developed by obstetrician/gynecologists, they have now been incorporated into this field. Similar indebtedness is owed to pathologists who had particular interest in the cytology and pathology of gynecologic malignancies and their precursors. This list could go on virtually endlessly, for it would need to include all who contributed to the medical knowledge which is utilized in the care of gynecologic malignancies.

Although many of these scientific contributions were made by those who utilized a single modality of treatment, it is to another group who were the philosophical ancestors of gynecologic oncology that we are most indebted. Adept and skilful in the use of both radical surgery and radiation therapy they studied the effects of combined therapy or developed tests which would allow them to select the proper therapy in a particular patient. Equally significant were the contributions of those who formed collaborative teams with representatives from each of the other therapeutic specialties. The underlying theme in all of this is the utilization in an individual patient of the most effective modality or modalities of treatment.

My own views of the development of gynecologic oncology as a field of specialization and the need to have clearly defined training programs have been greatly influenced by my tenure

on the American Board of Obstetrics and Gynecology. During that time the plans for creating the Division of Gynecologic Oncology were made and it was my pleasure to serve as the first Director of that Division. Therefore, much of what I will propose comes from that experience. The original guidelines of the division were published in 1972.¹ Sharing in their creation were George C. Lewis, Jr, J. George Moore, James H. Nelson, Jr and Felix N. Rutledge, as well as the directors of the parent board. I am grateful for their cooperation in this endeavor and would like to acknowledge that the final decisions represented a collaboration of all our thinking.

This program was developed to fit the conceived needs in the discipline of obstetrics and gynecology in the United States to improve gynecologic cancer care. It may not be a pattern which is equally useful in other countries. What is clear is that administering proper gynecologic cancer care requires more skill and knowledge than can be obtained in a core residency in obstetrics and gynecology. Also, if one believes that it is best to have all modalities of treatment available to a patient, the specialist administering or coordinating this care must have experience and formal training in each area.

TRAINING PROGRAM

To outline an appropriate training program for a person entering the subspecialty of gynecologic oncology is difficult, for the trainees will vary in their previous experience, surgical skills, intelligence, personality and all of the other qualities which may affect the rapidity with which they acquire the appropriate knowledge and skills. Since these reservations apply to any form of training, the emphasis here will be on the necessary contents of a training program. The following lists of knowledge and skills to be acquired are quoted from the original Bulletin of the Division of Gynecologic Oncology.¹ Further comments will be added.

Knowledge and skills to be acquired

A. Surgery. "An understanding and capability to perform radical pelvic operations independently including experience in operations upon the intestinal and urological organs as related to gynecologic cancer. The trainee is expected to acquire skill and ability to manage vascular, intestinal and urological problems caused by the growth of gynecologic cancer or as the result of treatment of this disease. Skill and knowledge for nonoperative management of conditions and diseases of the intestinal and urinary tracts is also expected." Acquisition by the trainee of skills not only in the primary radical surgery techniques but also in surgery involving the intestinal and urinary tracts (if involved by gynecologic cancer or affected by its treatment) prevents the fragmentation of surgical care that has worked to the detriment of these patients in the past. There can be no better example than

exenterative surgery in some centers where the extirpation was done by gynecologists, ileal segment isolated by general surgeons and ureteral-ileal anastomoses by urologists. Even when the surgery was successful the postoperative care required committee meetings and its outcome was often less successful. These skills cannot be accomplished rapidly, for trainees must first assist at these operations before they can be assisted in their own performance or have the skills and experience to carry them out independently. Because many of them are not procedures with which they would have had any experience during their core residency in obstetrics and gynecology, it is essential that the training program have sufficient clinical load to assure each trainee adequate opportunity to acquire this experience.

In addition to the technical skills of surgery, the trainee must also acquire the basic information from several areas of medicine which all surgeons taking any patient to the operating room should possess: that is, basic surgical skill and knowledge. A minimal list would include knowledge of anatomy, anesthesiology, antibiotics, pharmacology, wound healing, shock, surgical metabolism and the physiology and pathophysiology of the cardiovascular, hepatic, renal and respiratory systems. One characterization is that a gynecologic oncologist must be a "sick patient's doctor," and that means gaining the experience and skills necessary to care for the acutely ill patient who may require emergency surgery.

B. Radiation therapy. "The trainee should be formally instructed in the methods and techniques of radiation treatment including local, external and radioisotope therapy. He should participate in the management of patients receiving all forms of these treatments. There must be opportunity to acquire an understanding of the principles of radiobiology and radiation physics through courses of instruction. The trainee should develop a capability in the methods of radiotherapy by participating as a member of the team which plans radiotherapy, applies radioactive materials and decides the course of treatment. Training need not be of a degree to qualify him to work as an independent radiotherapist." The last point is very important. With today's advanced radiation techniques and radiobiology, it is difficult even for the full time specialist in the field to maintain excellence. However, in order to assure the best in radiation therapy, it is important that the therapist utilize the experience and knowledge of the gynecologic oncologist just as the gynecologic oncologist uses the expertise of the radiation therapist. This is particularly true in the area of intracavitary radiation and other forms of brachytherapy. The gynecologic oncologist may be more expert than some radiation therapists in identifying the endocervical canal in an advanced stage cervix cancer. Many consider it appropriate to have both gynecologists and radiation therapists participating in the original examination under anesthesia which is utilized for the staging of patients with cervical and endometrial cancers. In our own institution an attending physician from the gynecology service and one

from radiation therapy service must be present whenever intracavitary applicators are inserted even though the radiation sources are not added until later. The surgical skills and knowledge of anatomy of the gynecologic oncologist are crucial if the radiation therapist attempts interstitial radiation therapy, such as implanting a nonresectable pelvic sidewall mass. In this procedure the gynecologic oncologist needs to have dissected the small bowel and omentum from the pelvis and identified the nearby normal structures (including vessels, nerves, ureter, bladder and large bowel) before the radiation therapist begins the implantation.

Ideally, both the gynecologic oncologist and the radiation therapist recognize their mutual dependence on the other if patients are to have good care. *Collaboration rather than competition has become the order of the day.* The recent advent of pretreatment laparotomy to plan the proper fields of radiation therapy in patients with advanced cervix cancer is another example of the sort of cooperation needed. Finally, proper management of radiation-induced complications, whether by operative or nonoperative means, involves the gynecologic oncologist. Decisions concerning timing, preparation and techniques of surgical repairs of radiation-induced fistulas are among the most difficult that specialists in this field have to make. Similarly, experience in the long-term evaluation of patients treated with radiation therapy is important to the trainee because of the known difficulties of diagnosing recurrent disease in a field of prior therapeutic radiation therapy.

C. *Chemotherapy.* "The training should give a basic knowledge of clinical pharmacology as applied to cancer chemotherapy. The trainee must have experience and responsibility for selecting patients, choosing the proper drug, administering the treatment and caring for the toxic side effects of this treatment. The trainee's experience in the use of these agents should prepare him to employ them with confidence and skill." Because of the increasing importance of chemotherapy not only in palliative treatment, but recently in the potential cure of patients with metastatic gynecologic malignancies, it is mandatory that the gynecologic oncologist become knowledgeable in the mechanisms of action, toxic reactions, synergism and range of therapeutic usefulness of commonly used chemotherapeutic agents. Another recent expansion in this area has been the use of these agents for prophylactic therapy of the tumor that has been completely eradicated by surgery or radiation but which is at high risk of recurrence. In no other therapeutic area has the gynecologic oncologist gained more experience in clinical research than in the studies of the protocols produced by the cooperation of several cancer research groups. The Gynecologic Oncology Group has the largest number of participants, patients and protocols. Cooperation has taught investigators the importance of carefully planned protocols, uniform observations, and rigid statistical evaluation of the results. These cooperative groups have also had access to experimental or developmental drugs prior to their release for general use. Although

chemotherapy has not achieved the same importance as surgery or radiation therapy in the treatment of the majority of women with curable gynecologic malignancies, its systematic introduction as part of controlled studies has increased the clarity with which many gynecologic oncologists approach clinical problems and with which they statistically evaluate the results of therapeutic efforts.

D. *Post-therapy evaluation.* "The trainee should examine a sufficient number of patients who have received all forms of treatment to develop an ability to assess the effects of treatment, develop knowledge in the care of complications of therapy and acquire skill in the organization of the follow-up care of patients treated for gynecologic cancer. The population of patients in the follow-up care facility must be large enough for the trainee to become experienced in this phase of patient care." Although this part of a trainee's education sounds simplistic, it actually turns out to be one of the most difficult of subjects to teach, for the duration of a trainee's time in a single institution is such that the long-term follow-up, or long-term effects of therapy, are difficult for them to envision. If one is evaluating a patient who had an exenteration or radiation therapy 10 or 15 years prior to the trainee's entrance into medical school, it is not surprising that true appreciation of the effects of long-term disability on a patient's life is difficult. The concept that the therapeutic decisions and actions made today can result in complications, or subsequent surgery for complications, which affect the patient's life for decades is difficult to teach. Another problem is that of learning the difference between changes due to treatment and changes which might be due to persistent or recurrent disease. The evaluation of a pelvis after full therapeutic radiation is an example of a clinical problem in which experience is gained slowly. The tendency to take multiple biopsies in order to exclude the possibility that firm or thickened areas do not represent early recurrence leads to an increased risk of development of postradiation fistulas. The desire of many trainees to avoid outpatient follow-up visits and concentrate on inpatient and operating room therapy is easily understandable, but at the same time, care must be taken by the program director to be sure that appropriate attention is given to learning the proper skills in follow-up evaluation.

E. *Gynecologic pathology.* "To provide training in gynecologic pathology, the program should stress study of current specimens and give the trainee practical responsibility in gross and microscopic pathology. The trainee is expected to learn to correctly diagnose gynecologic neoplasias and to relate pathologic findings to proper therapy as well as prognosis." The reliance of a gynecologic oncologist on proper cytopathologic diagnoses is absolute. Many therapeutic decisions require collaboration between the pathologist and oncologist of a nature in which the pathologist is knowledgeable in the clinical implications of certain diagnoses and proper evaluation of a surgical specimen and the oncologist is aware of the importance and implication of the histologic diagnosis given by the

pathologist. The grading of cervical intraepithelial neoplasia, endometrial hyperplasias, endometrial cancers, and epithelial and germ cell tumors of the ovary, all have importance in the planning of appropriate therapy. Few gynecologic oncologists will spend the appropriate amount of time to qualify independently as gynecologic pathologists, but all should have basic knowledge and skills in surgical pathology and the histologic diagnosis of gynecologic malignancies. The recent decision by the Division of Gynecologic Oncology of the American Board of Obstetrics and Gynecology to include histology slides as part of the oral examination has served to reemphasize the importance of this field.²

F. Laboratory research. "Laboratory space, equipment and technical assistance are desirable to encourage research as part of the trainee's experience." Although it would be ideal if trainees had the time to gain knowledge and experience in laboratory research during their 2 years of training, on a practical basis, this has not worked out well in our own institution. The knowledge of laboratory research being carried on by other members of the gynecology service and research laboratories in the same institution has been stressed. However, for a trainee to gain useful skills in this area, we have found it important that he spend at least a year, and more often, 2 years, full-time in a laboratory. It is now commonly accepted that the laboratory research carried out by an investigator who is also active clinically must be of the same calibre as that of a full-time laboratory researcher in order to compete for limited space and funding. The place of the clinical dabblers in the laboratory seems to be past today. It is possible for one to be active in clinical care, clinical research and laboratory research after spending adequate times of training in the hospital and the laboratory, but it requires a very strong effort to protect the laboratory time because of the almost insatiable needs of the sick patients with gynecologic malignancies.

Faculty

The training of a gynecologic oncologist must be under the supervision and direction of a single individual who serves as program director and is responsible to see that the trainee actually receives the opportunity to gain the appropriate knowledge and skills. In those programs in the United States which have been approved by the Division of Gynecologic Oncology, the program director must be certified as to special competence in gynecologic oncology or have "equivalent training and experience."² Since the development of approved programs with specified content is fairly recent, most of today's training programs are headed by individuals who did not have the benefit of an approved fellowship program. It is important that the program director must assume the responsibility of seeing that others taking part in the training of a fellow have the necessary skills and qualifications to have a well-rounded program. For those who work as gynecologic oncologists, one of the most important considera-

tions is the number of people on the faculty. A common error that I have encountered is for the one or two members of a gynecologic oncology service to become so busy clinically that they take on a trainee to help out with the clinical load. It has been my observation that adding a fellow in training to a gynecologic oncology service requires more faculty personnel than is required to carry out the clinical care and research load. The planning and delivery of didactic teaching sessions and supervision in the operating room require time. In our own institution, we utilize members of the gynecology service to teach and supervise primary surgery of gynecologic malignancies and the related surgery on the genitourinary and gastrointestinal tracts due to growth of gynecologic malignancies or complications of their treatment. At the same time, our trainees rotate through other services for concentrated periods of training. These rotations include urology service, colon and rectal service, radiation therapy, chemotherapy and nutritional service, which includes total parenteral nutrition. Weekly sessions with the gynecologic pathologist are scheduled for the entire service. Thus, the faculty is not limited to those who are gynecologic oncologists, but includes all of those in the institution who collaborate in the care of women with gynecologic malignancies. Evaluating a faculty for their interest and commitment to teaching is difficult. Watching to see who performs the critical steps in an operation is a good way to judge this and often determines whether a trainee is being used only for assistance or is seen as someone whose proper training is considered of equal importance to the care of the patient. The responsible faculty will always make an effort to see that the care of patients is not prejudiced by the training of a fellow, but this balance is very difficult to achieve.

Institutional setting

In order to meet all of the training needs of a fellow in gynecologic oncology, an institution must have facilities for radical surgery, radiation therapy, aggressive chemotherapy and pathology. It must also have an appropriate faculty and, most important, sufficient patient population to give a trainee adequate experience in a reasonable period of time. Collaborative efforts between institutions have been utilized for full training. However, it is essential that such a collaborative effort be under the direction of a single program director to coordinate activities and opportunities in each institution such as to be certain that at the end of the training program the minimal requirements have been met. In addition to equipment and qualified personnel, it is essential that the institution have several departments within it committed to the importance of the training program. Since the entire development of this field has required acknowledgement by specialists in several therapeutic fields that the unifying focus should be the patient, and not the single therapeutic approach of the physician caring for her, the dedicated cooperation of representatives of radiation therapy, medical oncology,

general surgery and pathology is crucial. Although the clinical activities of gynecologic oncologists have raised jurisdictional disputes in some institutions, it has been my observation that this has tended to occur in institutions not dedicated to cancer care or in those in which the clinical load is not sufficient to keep the faculty busy enough to meet their own teaching and research needs. When stress is laid on the continuity of care of a single gynecologic cancer patient and efforts are made to enlist the cooperation of other departments (including having their trainees rotate through gynecologic oncology) it has been my observation that these jurisdictional disputes are unimportant.

Patient population

An adequate number of patients having the full range of gynecologic malignancies must be available in the institution in which the gynecologic oncologist is trained. This should include not only preinvasive and invasive malignancies, but also recurrent disease. The two most important questions are the total number of patients in each clinical category and, more important, the proportion of these patients which can be made available for the training. It is obvious that a trainee will gain more from carrying out an operation under the supervision of a senior faculty member than he would gain from just assisting. It is important that the program director have a sense of the progressive level of competence of the trainee so that the time at which he shifts from the assistant in a particular operation to one capable of carrying it out with assistance to one capable of performing it independently can be judged individually by both operation and by trainee.

The balance between the number of trainees and the number of patients with particular kinds of malignancies is a difficult one to define. In a paper on graduate education in obstetrics and gynecology, Rutledge³ proposed the following guidelines. In order to qualify as a gynecologic oncology training program, an institution should have "for the first trainee, 150 new admissions with gynecologic cancer, exclusive of carcinoma in situ, and for the second trainee, 75 additional new admissions, exclusive of cancer in situ." Specific numbers have not been universally accepted, but these guidelines offered by Rutledge in 1972 seem quite reasonable. The reason that specific numbers cannot be agreed upon is that each trainee must attain baseline skills in the areas outlined under Section 1. Thus, an institution which utilizes radiation as primary treatment of invasive carcinoma of the cervix might have a very large number of patients admitted with that diagnosis without giving a trainee much experience in primary radical surgery of this disease. Similarly, a service which admitted for chemotherapy a large number of patients with advanced ovarian cancer who had been treated surgically in other institutions would not give the same surgical experience in the initial therapy of ovarian cancer as would be obtained in an institution with a similar number of patients with ovarian cancer, but in which referral

took place prior to the time of the original surgery. In an effort to try to evaluate the learning experience of a trainee, the Division of Gynecologic Oncology originally proposed a Training Program Log¹ in which all trainees would record the patients in whose care they had participated, and the level of responsibility they had in this care.

Duration of training

It is obvious from the foregoing discussion that the information and skills of a gynecologic oncologist require not only formal institutional training, but a lifetime of dedication to maintaining and expanding those skills and levels of information attained during a training program. The basic question here is how long after an individual has become board eligible in obstetrics and gynecology should he be required to participate in a formal training program in order to be considered competent in gynecologic oncology. Most of us initially involved in the development of training programs felt that a period of 3 years would be appropriate, but this was later cut to 2 years in an effort to shorten the overall training program. As it is currently structured, a trainee must have completed 4 years of a core residency in obstetrics and gynecology and then 2 years in an approved Fellowship in Gynecologic Oncology in order to have met the training requirements of the Division of Gynecologic Oncology. It has been my observation that there are few trainees in obstetrics and gynecology who can come directly from residency in obstetrics and gynecology into the Fellowship in Gynecologic Oncology and utilize the full training opportunity at once. Put another way, there are few residencies in obstetrics and gynecology which can teach, in the 4 years following medical school, all of the information related to obstetrics, endocrinology, and benign gynecology and at the same time give a resident adequate time and instruction to become a good surgeon. Recently we have suggested that candidates coming into our program were more likely to be accepted if they have completed not only their core residency in obstetrics and gynecology, but also 2 extra years in general surgery. The entire development of the field of gynecologic oncology will be hampered if the surgery performed by these specialists is not as competently carried out as that by any other surgeon operating in the pelvis.

CLINICAL PRACTICE AND CONTINUING EDUCATION

After completion of Fellowship training, it is essential that a gynecologic oncologist works in an appropriate setting, not only to give good clinical care, but to continue gaining education and experience. This question of where one practices has been clearly defined in the most recent Bulletin of the Division of Gynecologic Oncology², in which the authors define not only a gynecologic oncologist, but his practice: "A